

Electromagnetic Separation of Platinum Isotopes

S07/89-5-6-6/25

Card 4/4

GUSEV, V. M., Candidate Phys-Math Sci (diss) -- "A high-temperature ion source for electromagnetic separation of isotopes of the elements of the platinum group". Moscow, 1959. 1 pp (Min Higher Educ USSR, Moscow Engineering Phys Inst), 100 copies (KL, No 25, 1959, 126)

*Gusev, V. M.*82166
S/048/60/024/06/11/017
B019/B067

24.6810

AUTHORS:

Gusev, V. M., Guseva, M. I., Vlasenko, V. P.,
Yelistratov, N. P.

TITLE:

Investigation of the Interaction of Fast Deuterium Ions
With MetalsPERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya,
1960, Vol. 24, No. 6, pp. 689-693

TEXT: This is the reproduction of a lecture delivered at the 9th All-Union Conference on Cathode Electronics from October 21 to 28, 1959 in Moscow. The authors investigated the sputtering of copper by deuterium ions with energies of 10 - 30 kev. Furthermore, the penetration of deuterium into copper, stainless steel, and some other metals in their bombardment with 25-kev deuterons was studied. Measurements were made in a small electromagnetic separator in which the beam of atomic deuterium ions was focused on the target of the metal to be investigated (Fig. 1). Sputtering was determined by measuring the reduction in weight of the target. Fig. 2 graphically shows the measured and the calculated coefficients of sputtering

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Investigation of the Interaction of Fast Deuterium
Ions With Metals

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A formula by R. Pease (Ref. 5) was used to calculate this coefficient. The experimental and the theoretical dependence of the coefficient on the ion energy have the same character; the experimental values are, however, somewhat higher which is brought into connection with the assumption used in the calculation that more than half of the atoms in the first three atomic layers are emitted. The penetration of deuterons into the metals, and the desorption of the driven-in atoms on heating the sample were studied by a method which is based on the measurement of the neutron output in the reaction $D(dn)He^3$ which takes place between the driven-in deuterium atoms and the incident deuterons. Fig. 3 graphically shows the dependence of the neutron output on the duration of irradiation of a copper target. A saturation of the metals with deuterium is concluded from the course of the curve. Furthermore, Fig. 4 shows the experimental results with which the dependence of the neutron output on the energy of the incident deuterium ions was determined on an Al-target. It is concluded from these results that the limiting concentration of the driven-in deuterium atoms increases with increasing energy of deuterons. An estimation of the amount of deuterium atoms per cm^2 of copper target with an energy of incident ions of 25 kev yielded a value of approximately $2 \cdot 10^{18}$ particles per cm^2 . In this estimation it was

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Investigation of the Interaction of Fast Deuterium Ions With Metals

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assumed that the driven-in atoms are regularly distributed over the range in which the deuterons are slowed down. Fig. 5 shows the dependence of the neutron output on the target temperature. As may be seen, neutron output at 500°C is about 20% of the initial value. The authors thank I. F. Kvartskhava and N. D. Morgulis for the discussion of some problems arising in these studies. There are 5 figures and 10 references: 6 Soviet, 2 American, 1 Swedish, and 1 German.

Card 3/3

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B116/B201

21.4210

AUTHORS: Gusev, V. M., Guseva, M. I., Yelistratov, N. P., and Ikonnikov, D. S.

TITLE: The problem of penetration of fast deuterium ions into metals

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 6, 1961, 749 - 750

TEXT: A paper by V. M. Gusev, M. I. Guseva, V. P. Vlasenko, N. P. Yelistratov (Ref. 1: Izv. AN SSSR, ser. fizich., 24, no. 6, 689, 1960) contains data regarding the largest possible number of deuterium atoms entering the surface layers of copper, stainless steel, and palladium targets irradiated by 25-kev deuteron beams of different intensities. In the course of further experiments, saturation curves were obtained for platinum, tantalum, silver, aluminum, gold, and titanium targets with deuterium (Fig. 1). For a more complete congelation of the oil vapors of the diffusion pump, an additional trap cooled by liquid nitrogen was placed in the vacuum chamber. Fig. 1 shows that most deuterium atoms are able to penetrate into titanium; more precisely, 14 times the number that penetrate into stainless steel (which absorbs the lowest amount of deuterium). If titanium is irradiated

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The problem of penetration...

with a deuteron beam having an energy of 25 kev and an intensity of 2 ma/cm^2 ,
the total neutron yield per cm^2 of wall will amount to $2.5 \cdot 10^6$ neutrons/second. Whenever a target was used several times, the thin surface layer saturated with deuterium during the previous experiment was mechanically removed before starting the experiment. The neutron yield always began from zero. On the other hand, if the target irradiation was interrupted for a number of hours or days, the former value of neutron yield was restored after irradiation was recommenced regardless of whether the target was placed in a vacuum or in air. This proves that deuterium does not diffuse into the interior of the metal, not even in titanium. The solubility of hydrogen in titanium is about 10^4 times as high as in copper, silver, aluminum, platinum, and stainless steel (Ref. 2: S. Deshman. Nauchnyye osnovy vakuumnoy tekhniki (Scientific basis of vacuum technology), M., p. 451, 1950.) Unlike the curves of other metals, the saturation curves of silver and gold with deuterium display maxima (Fig. 1). Further studies are required for clarifying the causes of their formation. The indications of the neutron recorder were photographed by a motion-picture camera and the authors suc-

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The problem of penetration...

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ceeded in determining the time dependence of the neutron yield in the first fractions of a second after beginning with the irradiation of the target by a deuteron beam. Fig. 2 shows the initial section of this curve for a stainless steel target. The linear course of this section proves that the gas generation coefficient of deuterium is almost zero during the first seconds of irradiation (when disregarding the reflection of deuterium ions from the target). After that, the neutron yield rises more slowly with time, and the curve tends toward saturation (Fig. 1). The conclusion may be drawn therefrom that equilibrium is established between the deuterium amounts reaching the target and those leaving the target due to diffusion and sputtering. There are 2 figures and 2 Soviet-bloc references.

ASSOCIATION: Fiziko-tehnicheskiy institut AN Gruz. SSR Sukhumi (Institute of Physics and Technology, AS Gruzinskaya SSR, Sukhumi)

SUBMITTED: December 26, 1960

Card 3/5

GUSEV, V.M. (Leningrad); PASHKOV, L.D. (Leningrad)

Heating panels made of asbestos cement. Vod. i san. tekhn. no. 11:3-5
(MIRA 15:6)
N 161. (Radiant heating) (Asbestos cement)

GUS'KOV, V.M. (Gus'kov, V.M.)

Contactless measurement of the thickness of sheet materials.
Khim. prom. [Ukr.] no. 4348-50 O-9163. (MIRA 17:6)

L-5788L-65 EJA(h)/ENI(1)/T Pz-6/Peb IIP(c) A7
ACCESSION NR: AP5017301

UR/0181/64/007/007/2077/2081

AUTHOR: Gusev, V. M.; Nitov, V. V.; Guseva, M. I.; Kurinnyy, V. I.

32
E

TITLE: Thermal emf in a quantizing field in semiconductors with multiellipsoid energy surfaces

SOURCE: Fizika tverdogo tela, v. 7, no. 7, 1965, 2077-2081

TOPIC TAGS: transverse thermal emf, thermal emf, semiconductor, conduction band

ABSTRACT: Obraztsov's formula relating entropy to transverse thermal emf in a semiconductor with a simple conduction band placed in a quantizing magnetic field (Yu. N. Obraztsov, FTI, 7, 2, 573, 1965) is extended to encompass semiconductors with ellipsoidal energy surfaces. Although the method can be used in investigating a degenerate electron gas, the present calculations are restricted to the non-degenerate case, when results are obtainable which can be applied to concrete band structures of the type found in n-Ge and n-Si. The thermal emf of such semiconductors, as affected by the magnetic field, is computed within the Boltzmann statistics approximation. Electron spin is taken into account, and examples are given of the application of the formulas to real semiconductors. Orig. art. has: 36 formulas.

[ZL]

Card 1/2

L-57881-65

ACCESSION NR: AP5017301

ASSOCIATION: none

SUBMITTED: 25Jan65

ENCL: 00

SUB CODE: SS, EM

NO REF SOV: 002

OTHER: 006

ATTD PRESS: 4C44

D

2/2 KC
-01

ZOLOTAREV, V.S.; GJSEV, V.M.

Electromagnetic separation of osmium isotopes. Priob. i tekhn,
eksp. 9 no.1:141-142 Ja-F '64. (MIRA 17:4)

L 34819-66 EWT(1)/EWT(m)/T/EWP(t)/FTI IGP(c) JD/AT
ACC NR: AP6018530 SOURCE CODE: UR/0181/66/008/006/1708/1712
13
68
B

AUTHOR: Gusev, V. M.; Zadde, V. V.; Landsman, A. P.; Titov, V. V.

ORG: none

TITLE: Investigation of certain characteristics of photoconverters with p-n junctions produced by ion bombardment

SOURCE: Fizika tverdogo tela, v. 8, no. 6, 1966, 1708-1712

TOPIC TAGS: photoconductive cell, pn junction, silicon, ion bombardment, volt ampere characteristic, spectral energy distribution

ABSTRACT: This is a continuation of earlier work by the authors (FTT v. 7, 2077, 1965), where a procedure was developed of producing silicon photoconverters by producing inside the silicon a p-n junction resulting from bombarding silicon with 30-kev phosphorus ions. The present paper describes the results of further studies of the characteristics of such converters. The experiments were carried out with p-type silicon of resistivity 4 ohm-cm and initial minority carrier lifetime 10—50 μ sec, using the same apparatus as before. The irradiation dose ranged from 1 to 10^5 μ Coul/cm², and the current density from 1 to 100 μ A/cm². The bombarding phosphorus energy was ~30 kev. It was found that the minimum dose required for the formation of the p-n junction was about 10^2 μ Coul/cm². Annealing the crystal (at 500 and 600C) after bombardment makes it possible to produce the junction with smaller dose (but still above the threshold). The depth of the junction ranges from 0.75 to 1.1 μ ,

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ACC NR: AP6018530

which is 15—20 times farther than the depth of penetration of the bombarding phosphorus ions. Photoconverters of this type have an efficiency of 6—8%, with a maximum sensitivity 800—900 nm and a strongly drooping volt-ampere characteristic. P. P. Borisov and V. P. Solov'yev took part in the work. The authors thank T. M. Golovner and V. Ya. Koval'skiy for measuring the spectral and load characteristics. [02]

Orig. art. has: 6 figures and 2 formulas.

SUB CODE: 20/ SUBM DATE: 21Oct65/ ORIG REF: 006/ OTH REF: 008
ATD PRESS: 603/

Card 2/2-20

GUSEV, V.M.; BEDNY, S.N.

Materials on the ecology of the eastern redheaded shrike (Lanius senator niloticus Bonaparte) in eastern Georgia. Trudy Inst. zool. AN Gruz. SSR 18:41-51 '61. (MIRA 15:6)
(Georgia--Shrikes)

MIKHAYLOVA, R.S.; GUSEVA, A.A.; GUSEV, V.M.

Cases of the isolation of Salmonella from ticks (Hyalomma
plumbeum (Panz.)). Trudy Nauch.-issl. protivochum. inst.
Kav. i Zakav. no. 5:215-216 '61. (MIRA 17:1)

GUSEV, V.M.; GUSEVA, A.A.; REZNIK, P.A.

Role of birds in the distribution of fleas (Suctoria) and
ticks (Ixodoidea) in Daghestan. Mol. paraz. i paraz. bol.
32 no.6:738-739 N-D '63 (MIL 18:1)

1. Iz Nauchno-issledovatel'skogo protivochurnogo instituta
Kavkaza i Zakavkaz'ya i Stavropol'skogo pedagogicheskogo
instituta.

GUSEV V. N.

181T1C4

User/Radio - Literature
Remote Control

三

NEW YORK 4, P 62

"Radio" No 4, p 62
lists 15 new brochures, none running over 72 pp
and most having about 50 pp., published by in-
dustries and organizations. Among the more in-
teresting are: "Amateur Short-Wave Antennas"
by V. N. Gusev, "The Cathode-Ray Oscilloscope" by
V. D. Osipov, and "Remote Radio Control" by
V. N. Loginov. Latter gives basic principles

USSR/Radio - Literature (Contd.)

四三

USSR/Radio - literature
on remote control and design of radio-controlled devices, and describes instrs and circuits used in telemech equipments.

APR 51

APPROVED FOR RELEASE: 09/19/2001

CIA-RDP86-00513R000617610004-6"

RYABOV, A.I.; ISAKOVA, Ye.A., inzhener; GUSEV, V.N., bukhgalter

Introduction of local economic accountability of the office of
the works superintendent. Transp. stroi. 12 no.6:7-8 Je '62.

(MIRA 15:6)

1. Nachal'nik stroitel'no-montazhnogo poyezda No.134. tresta
Kaztransstroy (for Ryabov).

(Construction industry--Accounting)

DEN'YANIKOV, I.G.; SHUGAR, I.V.; GUSEV, V.N.

Quantitative determination of elements by means of a short-wave
X-ray spectrometer with a monitor. Zav.lab. 27 no.9:1104-1106
'61. (MIRA 14:9)

1. Institut metallurgii i obogashcheniya Akademii nauk KazSSR.
(Spectrometry)

GUSEV, V.M., inzh.; MARKIN, V.P., inzh.; TERENKAL', V.R., inzh.;
SHEVAKIN, P.A., inzh.

Adjustment and test results of the TP-70 boiler operating on
natural gas. Energomashinostroenie 7 no.7:1-5 Jl :61.
(MIRA 14:8)
(Boilers--Testing)

ALEKSEYEV, A.V.; POPILOV, L.Ya.; GUSEV, V.N., laureat Stalinskikh premiy, inzh., red.; SLONIMSKIY, V.I., kand. tekhn.nauk, red.; SOKOLOVA, L.V., tekhn. red.

[Electric hardening of tools] Elektrouprochnenie instrumenta. Moskva, Mashgiz, 1952. 67 p. (Bibliotekha elektrotekhnologa, no.9) (MIRA 16:6)

(Tool steel—Hardening)

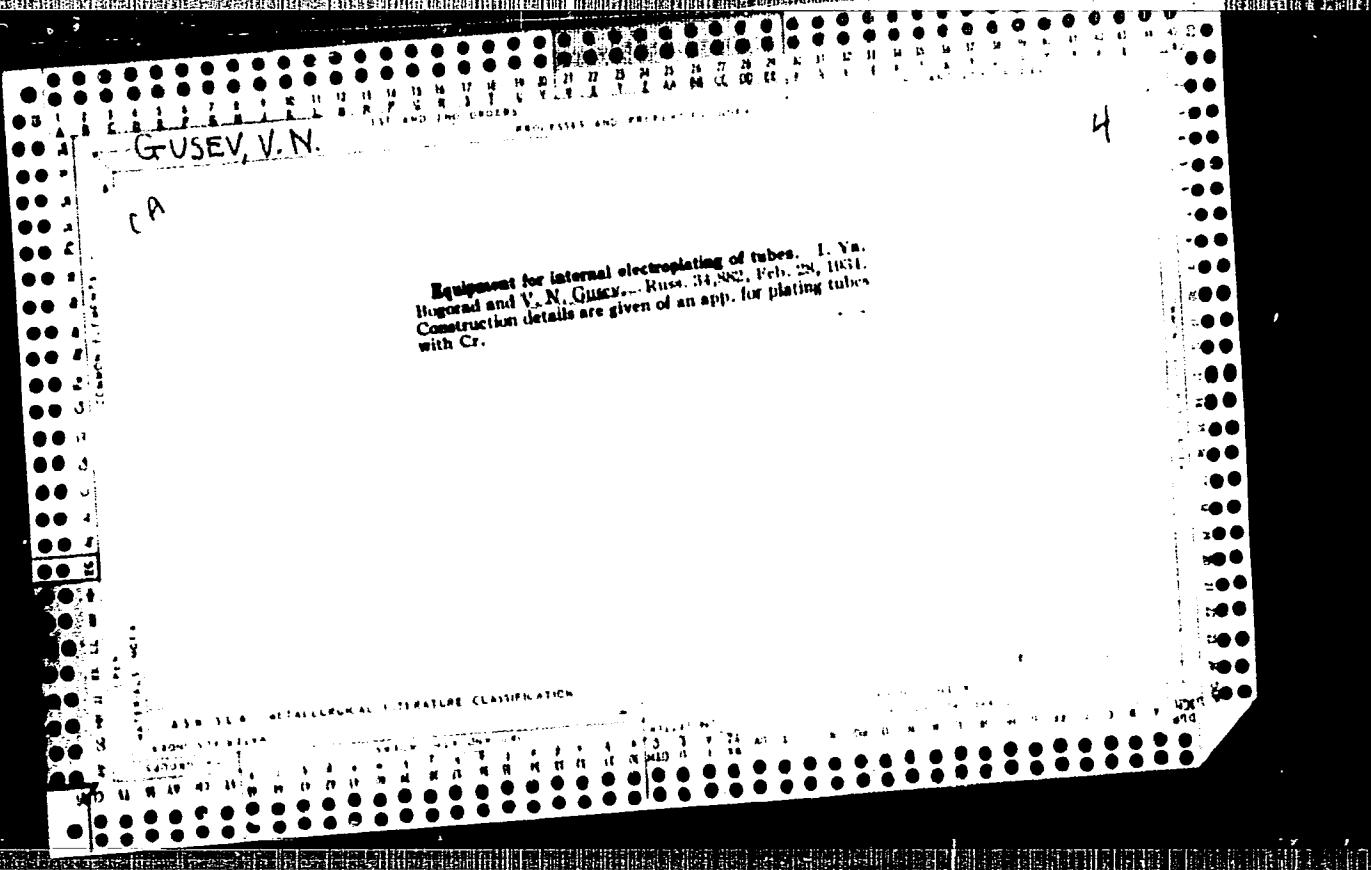
GUSEV, V.N., master

Methods for unlocking the traction motors of ChS2 and ChS3
electric locomotives. Elek. i tepl. tiaga 7 no. 2:13 F '63.
(MIRA 16:2)

1. TSekh periodicheskogo remonta depo Moskva-Tekhnicheskaya.
(Electric locomotives)

GUSEV, V.N.

Drying units with radiation heating. Siul. Tekhn.-ekon. inform.
Gos. nauch.-issl. inst. nauch. i tekhn. inform. 17 no.6:54-56
Je '64. (MIRA 17:11)



GUSEV, V.N.

15

4

Electrolytic etching of metals. V. N. Gusev, Russ
34,844, Feb. 26, 1934. In electrolytic etching of metal
the porous bodies inserted between the cathode and the
anodically treated metal are subjected alternately to
vacuum and pressure so as to increase the diffusion of the
electrolyte.

ALPSLA METALLURGICAL LITERATURE CLASSIFICATION

Production of manganese pigment of mineral violet
V. N. Gusev, Byull. Obzorn. Opt. Laboratoricheskoy Prom.
1930, No. 57, 234. A well-ground well-mixed mass
of 1 part KMnO₄ and 4 parts NH₄H₂PO₄ was put into
enamelled round vessels (1/2 mm) and put into a muffle
furnace at 100-50°. The temp. was raised to 310-20°.
The solidified mass was treated with H₂O₂, a fine brilliantly
violet pink was filtered, washed and dried at 60°. The
yield was 85% of the total charge. Twelve parts of a
wax were 100 parts of pigment and 38 parts of oil were
used in making artist paints. The sp. gr. of pigment
was 3.10, oil sorption 16.3. A water color made from
the pigment did not change color after exposure for 12
months. This water color is superior in smoothness to
that made from Co phosphate. David Aelony

GUSEV, V. N.
25564

Anodno-mekhanicheskaya obrabotka i nekotoryye primery ee primeneniya. V sb:
Nekotoryye voprosy tekhnologii mashinostroyeniya. M.-L. , 1948, s. 42-50

SO: LETOPIS NO. D, 1948

KARASIK, G.A.; KOSOLAPOV, I.I.; GUSEV, V.N., inzhener, laureat Stalinskikh premiy, retsenzant; BOGORAD, I.Ya., kandidat tekhnicheskikh nauk, laureat Stalinskoy premii, retsenzant; SLONIMSKIY, V.I., kandidat tekhnicheskikh nauk, dotsent, redaktor; POL'SKAYA, P.G., tekhnicheskiy redaktor

[Construction of anode-mechanical cutting and grinding machines]
Konstruirovaniye anodno-mekhanicheskikh otreznykh i zatochnykh stankov.
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. let-ry, 1951. 238 p.
[Microfilm] (MIRA 10:1)

(Cutting tools) (Grinding machines)

GUTKIN, B.G.; VISHNITSKIY, A.L.; GUSEV, V.N., laureat Stalinskoy premii, redaktor.

[Control systems for electric spark and electrolytic-mechanical tools] Regulyatory rezhima raboty elektroiskrovnykh i anodno-mekhanicheskikh stankov. Pod red. laureata Stalinskikh premii V.N.Guseva. Moskva, Gos. nauchno-tehn. izd-vo mashinostroit. lit-ry, 1952. 41 p.
(MLRA 6:8)
(Electric controllers)

GUSEV, V N.

25(1); pp 1 + 2

PHASE I BOOK EXPLOITATION

SOV/1404

Levinson, Ye. M., B. G. Gutkin, A. P. Dyatchenko, and Ye. I. Vladimirov

Polucheniye polostey i otverstii v metalle elektroiskrovym sposobom (Electrospark Method of Cutting Cavities and Holes in Metals) Moscow, Mashgiz, 1952. 93 p. (Series: Bibliotekha elektrotekhnologa, No. 4) 6,000 copies printed.

Ed. (Title page): Gusev, V. N., Laureate of the Stalin Prize, Engineer; Ed. (Inside book): Popilov, L. Ya., Engineer; Tech. Ed.: Sokolova, L. V.; Managing Ed. for Literature on Machine Building Technology (Leningrad Division, Mashgiz): Nikitin, P. S., Engineer.

PURPOSE: This booklet is intended for technologists working in the field of electrical metalworking processes and for skilled workers.

COVERAGE: The booklet presents basic principles of the electrospark machining of holes and cavities in metals. Information on electrospark equipment is given and some examples of the applications of electrospark machining methods are presented. The following personalities were awarded Stalin prizes for their contributions to the development of electromachining methods; B. R. Lazarenko, N. I. Lazarenko, and V. N. Gusev. For the purpose of introducing and promoting electromachining methods, the Leningrad branch of Mashgiz (State Scientific

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Electrospark Method of Cutting Cavities (Cont.)

SOV/1404

and Technical Publishing House of Literature on Machinery) on the recommendation of the Committee on electromachining of Lonitomash (Leningrad Branch of the Scientific, Engineering and Technical Society of Mechanical Engineers) undertook publication of the "Library for Electrotechnologists" which includes the following booklets: 1. Gusev, V.N. Anodic-mechanical Machining of Metals 2. Levinson, Ye. M. Electrospark Machining of Metals 3. Kosmachev, I.G., P. S. Kryzhanovskiy, and P.D. Klimchenkov. Anodic-mechanical Sharpening of Hard Alloy Tools 4. Levinson, Ye.M., B.G. Gutkin, A.P. Dyatchenko, and Ye. I. Vladimirov. Electrospark Method of Cutting Cavities and Holes in Metal 5. Chetyrkin, N.P. Anodic-mechanical Cutting of Metals 6. Ivanov, V.K. Anodic-mechanical Machining of Draw Plates and Dies 7. Man, B. I., and I. G. Kosmachev. Anodic-mechanical Metal Finishing 8. Gutkin, B.G. and A. L. Vishnitskiy. Controls for the Operating Regime of Electrospark and Anodic-mechanical Machine Tools 9. Alekseyev, A.V., and L.Ya. Popilov. Electric Hardening of Tools, 10. Bogorad, L.Ya. Electrochemical Metal Polishing: The booklet contains illustrations and diagrams. There are no references.

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Foreword

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Electrospark Method of Cutting Cavities (Cont.)	SOV/1404
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AVAILABLE: Library of Congress

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Card 3/3

GUSEV, V.N.

GUTKIN, B.G., kand.tekhn.nauk; GUSEV, V.N., laureat Satlinskikh premiy
inzh., retsenzent; LEVINSON, Ya.M., inzh., retsenzent; LOMACHENKOVA,
S.Ye., inzh., red.; POL'SKAYA, R.G., tekhn.red.

[Automatization of electric-spark and electrolytic-mechanical tools]
Avtomatizatsiya elektroiskrovych i anodno-mekhanicheskikh stankov.
Moskva, Gos. nauchno-tekhn. izd-vo mashinostroit. lit-ry, 1952. 226 p.
(Electric controllers) (MIRA 11:2)
(Electric cutting machinery)

GUSEV, V. N.

USSR/ Engineering - Machining methods

Card 1/1 Pub. 77 - 10/20

Authors : Gusev, V. N., and Grilikhes, S. Ya., Cand. Tech. Sci.

Title : Electrical machining of metals

Periodical : Nauka i zhizn' 21/12, 25-26, Dec 1954

Abstract : Mechanical methods for machining are found to be inadequate for machining extremely hard alloys used in the making of special mechanisms. To surmount this obstacle Soviet engineers have developed electrical and electro-chemical methods. The authors give the electrical characteristics and explain the working of a process for removing metal from a piece with an electric spark. A description is also given of a chemical drilling device. These methods are designed to speed up production. Illustration; drawings.

Institution : ...

Submitted : ...

GUSEV, V. N.

GUSEV, V. N.: "The theory of the most efficient distribution of load among thermal electric power stations and some problems of its practical application under the conditions of modern power systems." Min Higher Education USSR. Leningrad Polytechnic Inst imeni M. I. Kalinin. Leningrad, 1956. (Dissertation for the Degree of Candidate in Technical Sciences).

Source: Knizhnaya letopis' No. 28 1956 Moscow

GUSEV, V.N., kand.tekhn.nauk

Calculating flexible pavements considering them as viscous
elastic-plastic systems. Trudy MADI no.23:118-126 '58.
(MIRA 12:1)

(Pavements--Testing)

GUSEV, V.N.

PAGE I POCK EXPLOITATION

607/660

Mashino-tekhnicheskoye stolchesstvo mashinostroitel'noy promyslennosti.
Tsentral'naya pravleniya. Sektsiya remonta i modernizatsii oborudovaniya
Modernizatsiya i remont oborudovaniya mashinostroitel'nykh zavodov (Modernization
and Repair of Machine-Building Plant Equipment) Moscow, MASHGIZ, 1959.
261 p. Errata slip inserted. 6,100 copies printed.

Ed. (Title page): R.A. Noshkin, Candidate of Technical Sciences; Ed. (Inside book):
A.T. Prosv, Engineer; Tech. Ed.: V.D. El'kina; Managing Ed. for Literature on
Metalworking and Machine-Tool Construction (MASHGIZ): R.D. Bayzel'man, Engineer;
Editorial Board: R.A. Noshkin (Chairman), Candidate of Technical Sciences;
Ya.S. Borisov, Engineer; V.D. Plotnev, Engineer; V.I. Mikhaylovskiy, Engineer;
and T.P. Golov, Engineer.

PURPOSE: This collection of articles is intended for technical personnel dealing
with modernization and overhaul of equipment.

COVERAGE: The articles in this collection deal with the basic trends and a number
of specific problems in the modernization of the machine industry. Modernization
of foundry, forging-shop, and crane equipment and problems in the automation of
equipment repair are discussed. Information is given on the use of untried

Filonenkiy, P.G. [Engineer]. Practices of Machine-Tool Modernization 160

Gusev, V.N. [Engineer]. Attachments for Shortening Setup Time in
Equipment Modernization 185

Golyzayev, V.Ye. [Engineer, Moscowvskiy tornmasyz zavod (Moscow Brake
Plant)]; A.N. Dal'skiy, [Candidate of Technical Sciences, MFTU imeni
Bauman]. Measurement of the Constructual Rigidity of Metal-Cutting
Machine Tools During Repair and Modernization 214

Protasov, V.I. [Engineer, Chelyabinsk traktornyy zavod (Chelyabinsk
Tractor Plant)]. Use of Automatic Vibrant Hard Facing (with
Vibrating Electrodes) 226

Kuzmin, N.N. [Engineer]. Sulfidation of Parts of Machine-Tool Equipment 236

Polyukhova, F.F. Mechanization of Repair Work and the Use of
Progressive Equipment 241

Buchegalov, T.P. [Candidate of Technical Sciences, Tbilisi GOMZ],
Vibroisolation of Foundations of Forging Hammars 254

AVAILABLE: Library of Congress

Card b/b

7-8-60

VX/maa

SOV/96-59-9-13/22

AUTHOR: Gusev, V.N. (Candidate of Technical Sciences)

TITLE: The Principles Governing the Distribution of District Heating Loads

PERIODICAL: Teploenergetika, 1959, Nr 9, pp 68-70 (USSR)

ABSTRACT: The usual method of distributing thermal load between generating sets of stations is based on generating the maximum amount of electricity for a given heating load. Nemtsev published an article in Teploenergetika Nr 2, 1958, which directed particular attention to minimising the heat loss from the condensers to the cooling water. Neither of these principles is always right. The most general principle to adopt in distributing thermal load between sets and stations is to achieve the minimum fuel consumption. On this basis the criterion for load distribution is operation of the sets with equal incremental fuel rates with respect to the heat outputs in the steam from the turbine tappings. This criterion, β , is given by Eq (1), which for simplicity or convenience may be used in the forms of Eqs (2) or (3). To achieve the minimum fuel consumption the turbine tappings are loaded in the order of increasing values of β . Table 1

Card 1/3

SOV/96-59-9-13/22

The Principles Governing the Distribution of District Heating Loads

gives calculated results of the relative increase in fuel consumption against output of thermal energy from a turbine tapping and also values of other relevant magnitudes. From analysis of the table it is concluded that it may sometimes be best to load fully the tappings of a turbine whose output and initial steam conditions are low. This may reduce the amount of electricity generated in connection with heat production but still keep the overall fuel consumption at a minimum. The conclusion is confirmed by making calculations of distribution of thermal load between sets of a heat and electric power station. The results of the calculations are given in Table 3, which shows that the suggested method of load distribution does indeed give the lowest fuel consumption. The above conclusions are valid provided that the turbines are all supplied by boilers of the same thermal efficiency but, as will be seen from the data given in Table 4, different types of boilers have a different incremental fuel rate for a given heat output in the form of live steam. This point must be taken into account in making the comparison.

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SOV/96-59-9-13/22

The Principles Governing the Distribution of District Heating Loads

There are 4 tables and 2 Soviet references.

ASSOCIATION: Leningradskiy politekhnicheskiy institut
(Leningrad Polytechnical Institute)

Card 3/3

GUSEV, V.N., inzh.

Continuous production line for the heat treatment of elastic
washers. Mashinostroitel' no.4:13-15 Ap '60.
(MIRA 13:6)
(Washers (Mechanical engineering))
(Steel--Heat treatment)

S/264/62/000/003/001/007
I006/I206

AUTHOR Gusev, V N

TITLE: On the problem of starting of supersonic nozzles

PERIODICAL Referativnyy zhurnal, vozдушный транспорт, съодный том, № 3, 1962, 6-7, abstract
3 A 27 "Inzhenernyy zh." [formerly Inzhenerny sb.], v. 1, no. 1, 1961, 164-168

TEXT: The laws of nonsteady gas outflow into a vacuum through a plain or axisymmetric supersonic nozzle are considered. Shock tube diagrams for discharge and impulse arrangement are presented.

[Abstracter's note. Complete translation.]

Card 1/1

24.2120

S/124/62/000/008/003/030
I006/I242

AUTHOR: Gusev, V.N.

TITLE: Investigation of flow in a discharge unit

PERIODICAL: Referativnyy zhurnal, Mekhanika, no.8, 1962, 15,
abstract 8B89. (Inzhenernyy zh., v.1, no.3,
161-165)

TEXT: The motion of a shock wave in a discharge-type arrangement is considered. Gas fills a tube of constant cross-section. Electrodes, through which a condenser battery is discharged, are placed at the end of the tube. The gas, which is highly warmed by discharge, expands and a shock wave propagates into the undisturbed gas along the tube. Usually the gas flow

Card 1/3

S/124/62/000/008/003/030
I006/I242

Investigation of flow...

during discharge is considered following the solution of the strong blast problem. Here, however, the energy is not discharged instantaneously, but gradually, so that the warmed pushing gas acts rather like a piston, creating a shock wave. In this paper the shock wave motion is considered with continuous energy addition according to an exponential law. The boundary between the pushing gas, in which the discharge takes place, and the gas in which the shock wave propagates, is considered impenetrable. The shock wave is considered strong. With an exponential energy discharge, when the energy discharged up to time t is given $E = E_0 t^n$, the motion is self-similar. The self-similar solution is constructed at $n = 1$, which corresponds in some way to experimental data for the initial stage of discharge. In this case all variables between shock wave front and contact boundary with the pushing gas are independent of the coordinates and time. The constant entering the solution depends on the energy

Card 2/3

S/124/62/000/008/003/030
I006, I242

Investigation of flow...

balance in the pushing gas. If account should be taken of the fact that, as a result of energy discharge, a constant fraction of the energy $1-\eta$ goes into the shock wave, whereas the fraction η is used for heating of the pushing gas, then the expression

$D = (\gamma + \frac{1}{2})^{\frac{1}{\gamma}} [(1 + \eta) E_0 / \rho_0]^{\frac{1}{\gamma}}$ is obtained for the shock wave velocity, where ρ_0 - density of undisturbed gas, γ - adiabatic index. The variation of D with $\log_{10} E_0 / \rho_0$ at $\eta = 0$, $\delta = 1.4$, is compared graphically with the experimental curve. The curves are parallel, but are about a unit apart along the x-axis.

[Abstracter's note: complete translation.]

Card 3/3

BOLOTOV, V.V., doktor tekhn.nauk, prof.; GUSEV, V.N., kand.tekhn.nauk,
dotsent; DOLGOV, P.P., kand.tekhn.nauk, dotsent

"Optimum operation of hydroelectric power stations in
consolidated electric power systems" by V.M. Gornshtein.
Reviewed by V.V. Bolotov, V.N. Gusev, and P.P. Dolgov.
Elektrichestvo no.5:93-95 My '62. (MIRA 15:5)
(Interconnected electric utility systems)
(Hydroelectric power stations)
(Gornshtein, V.M.)

BOLOTOV, V.V.; GUSEV, V.N.; DOLGOV, P.P.

Concerning V.M. Gornshstein's reply to the review of "Optimum
operating modes of hydroelectric power stations in consolidated
power systems." Elektrichestvo no.12:84 D '62. (MIRA 15:12)

(Hydroelectric power stations)

(Interconnected electric utility systems) (Gornshtein, V.M.)

GUSEV, V.N., kand.tekhn.nauk; VAVIL'YEV, N.S.; inzh.; TELEGIN, L.L., inzh.

Concerning S.E.Shitsman's article "Methodology of accounting
for and standardizing the engineering and economic indices of
thermal electric power plants." Elek.sta. 33 no.11:89-92 N '62,
(MIRA 15:12)

(Electric power plants)

BOCHAROV, N.F., kand. tekhn. nauk; KRADINOV, Ye.B.; GUSEV, V.N.;
ABRAMOVA, E.Ye.

Testing pneumatic rollers in spring plowing. Avt. prom. 29
no. 4:18-20 Ap '63. (MIRA 16:6)

1. Moskovskoye vyssheye tekhnicheskoye uchilishche imeni
Baumana i Nauchno-issledovatel'skiy institut shinnoy promysh-
lennosti. (Agricultural machinery...Testing)

GUSEV, V.N. (Moskva); KRYUKOVA, S.G. (Moskva)

Hypersonic helium flow about highly blunt bodies. Inzh.zhur. 5
no.2:239-242 '65. (MIRA 18:4)

L 55935-65 EWT(d)/EWT(l)/EWP(m)/EWT(m)/EWP(r)/EMG(r)/EMI(a)/EMF(r)/EMP(r)/
FCS(k)/EMA(h)/EMA(c) Pd-1/Pa-5/Pf-4/Peb 1W/EM

ACCESSION NR: AP5016262

UR/0258/65/005/003/0416/0424
533.6.011.55

47

AUTHOR: Gusev, V. N. (Moscow); Klimova, T. V. (Moscow); Korolev, A. S. (Moscow);
Kryukova, S. G. (Moscow); Nikolayev, V. S. (Moscow)

TITLE: Hypersonic, viscous gas flows past sharp-nosed cones

SOURCE: Inzhenernyy zhurnal, v. 5, no. 3, 1965, 416-424

TOPIC TAGS: hypersonic flow, hypersonic viscous flow, hypersonic flow past cone,
hypersonic similitude, real gas effect, drag, friction drag, boundary layer,
hypersonic interaction parameter, boundary layer interaction

ABSTRACT: Hypersonic, viscous gas flows past slender sharp-nosed, thermally-insulated cones at arbitrary angles of attack are investigated. On the basis of the law of viscous hypersonic similitude, expressions are derived for pressure and local skin-friction coefficients, and for the drag acting on the body in the direction of flow. Two limiting cases are considered, that is, 1) when the relative thickness of the boundary layer δ is $\ll \Theta$ (where Θ is a thickness ratio), and 2) when $\delta \sim \Theta$. In the first case, the friction drag is negligibly small as compared with the wave drag, but in the second case they are comparable. Thus,

Card 137 Date 1964 - 02/14/2002

L-36934-55
ACCESSION NR: AP5016262

the magnitude of the drag is essentially dependent on the relative thickness of the boundary layer; it was determined experimentally in vacuum and in helium aerodynamic wind tunnels at $M_\infty = 5.15$ with $\delta < \theta_k$; at $M = 18.5, 20$, and 21.5 with $\delta \sim \theta_k$, respectively; for cones of semiapex angles of $5^\circ < \theta < 20^\circ$. The values of the displacement thickness were determined by measuring the angle of the shock wave recorded by the glow-discharge method. The values of the total drag coefficient were plotted as a function of the parameter $C_k^2 V^2 M_\infty$. Optimal parameters of sharp-nosed cones in hypersonic viscous gas flows with respect to minimum drag were investigated at various fixed values of one of the geometric parameters, such as length, surface, or volume. Hypersonic viscous gas flows past cones at small, then at large angles of attack, were also considered and experimentally investigated at the following values of the hypersonic interaction parameter: $\chi_\infty = 2.5, 4.5$, and 4.7 . An analysis of the results shows that viscosity effects are substantial only at small angles of attack in the range of interaction parameter considered here, and that when the angle of attack is increased, the magnitudes of the total forces applied to the cone by a viscous flow coincide with those obtained from using the theory of ideal flows. Orig. art. has: 5 figures and 5 formulas.

[AB]

ASSOCIATION: none

Card 2/3

GUSEV, V.N.

Introducing an electric furnace having a vibratory conveyor for annealing bolts after upsetting. Biul.-tekhn.-ekon.inform.Gos, nauch.-issl. inst.nauch.i tekhn.inform. 18 no.9:18-20 S '65.
(MIRA 18:10)

L 42958-65 EWT(l)/EWP(m)/EWT(m)/EPF(c)/ENG(v)/EMP(t)/FCS(k)/EMP(b)/EMA(c)
Pd-1/Pe-57 Pr-4 IJP(c) MN/JD

ACCESSIONNR: AP5011316

UR/0258/65/005/012/0239/0242

AUTHOR: Gusev, V. N. (Moscow); Kryukova, S. G. (Moscow)

TITLE: Hypersonic flow over strongly blunted bodies in helium

SOURCE: Inzhenernyy zhurnal, v. 5, no. 2, 1965, 239-242

TOPIC TAGS: hypersonic flow, shock wave, bluntness effect, shock wave, drag, drag coefficient

ABSTRACT: An experimental investigation of the peculiarities of hypersonic flow over blunt bodies in helium at Mach 18 and $Re \approx 10^6$ in a hypersonic wind tunnel is reported. The effect of leading edge bluntness on the drag and the shock shape was investigated experimentally with various models such as circles, squares, rectangles, and triangles, and with different values of maximum and minimum typical dimensions of bluntness. The form of leading edge bluntness influences the shape of the bow shock wave only in the vicinity of the leading edge; at a certain distance downstream, the shock shape is practically the same for all models. Further experiments show that the form of leading edge bluntness has no effect on the magnitude of its drag. The experimental and theoretical values calculated by the Newton formula for the coefficient C of a force normal to the plane of leading

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L 42958-65

ACCESSION NR: AP5011316

edge bluntness versus the angle of attack are presented in a graph. The experiments on hypersonic flow over strongly blunted bodies such as truncated cones and trihedral and tetrahedral pyramids also show that the drag coefficient of a body does not depend on body shape when the drag of its leading edge is predominant in the expression for total drag. Orig. art. has: 3 figures. [AB]

ASSOCIATION: none

SUBMITTED: 30Sep64

ENCL: 00

SUB CODE: ME, AS

NO REF SOV: 003

OTHER: 002

ATT PRSS: 3236

Card 2/2 01

L 10904-66 EWT(m)/T/EWA(m)-2/EWA(h) IJP(c)

ACC NR: AP6002614

SOURCE CODE: UR/0258/65/005/006/1010/1020

AUTHOR: Galkin, V. S. (Moscow); Gusev, V. N. (Moscow); Klimova, T. V. (Moscow)

ORG: none

TITLE: Characteristics of a hypersonic viscous gas flow past bodies of simplest shape and their aerodynamic characteristics

SOURCE: Inzhenernyy zhurnal, v. 5, no. 6, 1965, 1010-1020

TOPIC TAGS: hypersonic aerodynamics, aerodynamic characteristics, viscous flow, boundary layer, lift, drag coefficient, friction coefficient

ABSTRACT: This paper presents an analysis of theoretical and experimental data obtained from a large number (19) of studies related to the characteristics of hypersonic viscous gas flows past slender sharp- and blunt-nosed cones and their aerodynamic characteristics at various angles of attack in thermodynamically perfect gas flows. In section 1, hypersonic viscous flows past heat-insulated and cooled ($T_w \ll T_0$) slender, sharp-nosed cones with various semiapex angles θ and angles of attack α are considered. The behavior of drag and lift coefficients under various flow conditions, their dependence on the Knudsen number and parameter $\theta\sqrt{Re}$, and the limits of applicability of the free molecular theory are discussed. Section 2 deals with hypersonic viscous flows past blunt-nosed cones and discusses the effects of viscosity and bluntness on the drag coefficient, the boundary

Card 1/2

UDC: 533.6.011.55

L 10904-66

ACC NR: AP6002614

layer displacement effect on flow, similarity parameters, and conditions at various angles of attack. Hypersonic rarefied gas flows over flat plates are treated in section 3, where the effect of rarefaction on the friction coefficient, the flow above the plate and the influence of the angle of attack on zones of rarefaction are examined. An approximate method for calculating the flow past slender blunted bodies is outlined in section 4. The complexity of the determination of the inviscid part of the flow is stressed and the necessity of using rough assumptions, as has been done by H. K. Cheng (TASS v. 28, no. 5, 1961), is pointed out. Hypersonic, viscous flow past a blunt-nosed cone is treated as an illustrative example, assuming that the pressure on the outer boundary of an entropy layer is given by the Busemann formula. Distributions of boundary layer thickness, friction and drag coefficients, and pressure on the cone surface were calculated on a computer. The pressure distribution which characterizes the effect of boundary layer-viscous flow interaction on the flow structure is given in graphs and appears primarily in the region of minimum pressure and behind it. Orig. art. has: 9 figures and 4 formulas.

[AB]

SUB CODE: 20 SUBM DATE: 15Jun65/ ORIG REF: 011/ OTH REF: 008/ ATD PRESS:

4172

RC
Card 2/2

GUSEV, V.N., kand.tekhn.nauk; LIPOCHKINA, T.V., inzh.; OKOROKOV, V.R.,
kand.tekhn.nauk; SHAKHIDZHANYAN, V.M., kand.tekhn.nauk

Consideration of operating conditions in the design of power
transformers. Elektrotehnika 36 no.12:21-24 D '65.
(MIRA 19:1)

...pirov, V. N.

ABRAMOV, Sergey Aleksandrovich; MELIKHOV, S.A., doteent, retsenzent; SOBOLEV,
S.A., inzhener, retsenzent; GUSEV, V.P., inzhener, retsenzent;
PLEMYANNIKOV, M.N., redaktor; KOGAN, V.V., tekhnicheskiy redaktor

[Finishing of knit goods] Otdelka trikotazhnykh izdelii. Moskva,
Gos.nauchno-tekhn.izd-vo M-va legkoi promyshl. SSSR, 1957. 370 p.
(Knit goods) (MIRA 10:10)

ABRAMOV, Sergey Aleksandrovich; GUSEV, V.P., retsenzent; GABOVA, D.M.,
red.; KUFTINA, R.K., tekhn. red.

[Equipment and technology for the steam setting of capron
hosiery]Oborudovanie i tekhnologiiia zaparivaniia kapronovykh
chulok. Moskva, Rostekhizdat, 1962. 140 p. (MIRA 16:1)
(Hosiery, Nylon) (Textile machinery)

GUSEV, V. P., (Institute of Cinematography, Leningrad)

PROVOROV, S. M., and GREBENNIKOV, O. F.

Universal Raster Camera with Continuous Sweep for High-Speed Photography.

report submitted for: The 5th International High Speed Photography Congress,
Washington, D.C. 16-22 Oct., 1960.

PROVOROV, S.M.; GREBENNIKOV, O.F.; GUSEV, V.P.

Using the SKS-1 camera as a photographic recorder. Zhur.nauch.
i prikl.fot. i kin. 6 no. 5;386-388 S-0 '61. (MIRA 14:9)

1. Leningradskiy institut kinoinzhenerov.
(Photography--Apparatus and supplies)

BARENBOYM, Y e.L., podpolkovnik med.sluzhby; GUSEV, V.P., mayor med.
sluzhby

Use of nasal reflexotherapy in peptic ulcer. Voen.-med.shur.
no.2:83-84 F '60. (MIRA 13:5)

(REFLEXOTHERAPY)
(PEPTIC ULCER therapy)

GUSEV, Vladimir Petrovich. Prinimali uchastiye: SAKHAROV, M.A.; OBICHKIN, Yu.G.; FOMIN, A.V.; SEMIKOV, G.A.; NAZAROV, A.S.; ANDREYEVSKIY, M.N., retsentent; KUNIYAVSKIY, G.M., retsentent; BLINNIKOV, I.V., retsentent; BEREZNITSKIY, V.S., red.; SUKHANOV, Yu.I., red.; SVESHNIKOV, A.A., tekhn. red.

[Technology of the manufacture of radio electronic equipment] Tekhnologiya proizvodstva radioelektronnoi apparatury. Moskva, Izd-vo "Sovetskoe radio," 1961. 387 p. (MIRA 14:9)
(Radio—Equipment and supplies)

GUSEV, V.P.; FOMIN, A.V.; KUNYAVSKIY, G.M.; OBICHKIN, Yu.G.;
MOLOSTOV, Ye.A.; NAZAROV, A.S.; SAKHAROV, M.A.; GREBNEV,
A.K.; VARLAMOV, R.G., retsenzent; DEMBITSKIY, L.N.,
retsenzent; RAKOV, N.A., retsenzent; LYUBIMOVA, T.M., red.;
BELYAYEVA, V.V., tekhn. red.

[Calculation of electrical tolerances in radio-electronic
apparatus] Raschet elektricheskikh dopuskov radioelektron-
noi apparatury. [By] V.P.Gusev i dr. Moskva, "Sovetskoe
radio," 1963. 366 p. (MIRA 17:1)

PROVOROV, S.M., prof.; GRIVINSKIKOV, G.F., kand.tekhn.nauk, dotsent;
GIUSEV, V.F.

Grid-frame RKS-2 camera with a frequency of up to 500 million
pictures per second. Usp.nauch.fot. 9:27-28 '64.
(MIRA 18:11)

SHIKHOB, V.N.; ANISIMOV, V.A.; Prinimali uchastiye: MAKURIN, P.I.;
NIKULINA, L.P.; TKACHEV, V.V.; NEMTSEV, I.I.; MIKHEYEVA, G.P.;
GUSEV, V.P.; TARASOV, A.I.

Measures for the control of static electricity in rubber cement
coaters. Kauch. i rez. 24 no.11:42-45 '65. (MIRA 19:1)

1. Ural'skiy politekhnicheskiy institut, Sverdlovsk, i Sverdlovskiy
zavod rezinovykh tekhnicheskikh izdeliy.

GUSEV, V. P.

Cand Tech Sci

Dissertation: "Investigation of the Surface Anality of Steels After High-Speed Milling, in Application to the Parts of Aviation Equipment."

29 April 49

Moscow Order of Lenin Aviation Inst
imeni Sergo Ordzhonikidze

SO Vecheryaya Moskva
Sum 71

GUSEV, V.P., inzhener.

~~Small size crane. Mekh.stroi. ll no.5:32 My '54. (MLRA 7:5)~~
~~(Cranes, derricks, etc.)~~

GUSEV, V. P.

DRITS, Mikhail Yefimovich; MASTRYUKOV, Aleksandr Vasil'yevich,
redaktor; GUSEV, Viktor Petrovich; CHALKUSH'YAN, L.P., redaktor;
EL'KINA, E.M., tekhnicheskiy redaktor;

[Bearing alloys with a zinc foundation and their use in light
industry] Podshipnikovye splavy na tsinkovoi osnove i ikh
primenenie v legkoi promyshlennosti. Pod red. A.V. Mastriukeva.
Moskva, Gos. nauchno-tekhn. isd-vo Ministerstva promsh.tovarov
shirokogo potreblenia SSSR, 1955. 78 p. (MLRA 8:12)
(Alloys) (Bearings(Machinery))

GUSEV, V.P., inzhener.

Using a cableway in applying roofing. Mekh.stroi. 12 no.2:30 F '55.
(Roofing) (Wire-rope transportation) (MLRA 8:4)

GUSEV, V.P., inzhener

Three-roller pinionless paint grinder. Mekh. stroi. 12
no.5:27-28 My '55. (MLRA 8:6)
(Paint machinery)

GUSEV, V.P., inzhener

Improve the design of hand-operated compressed-air paint sprayers.
Mekh.stroi. 12 no.8:28-29 Ap'55. (MIRA 8:10)
(Spraying equipment)

GUSEV, V., inzhener.

Small-size jib crane. Sel'stroy. no. 8:14-15 Ag '56. (MLRA 9:10)
(Cranes, derricks, etc.)

Gusev
GUSEV, V.P., dots.(Rostov-na-Donu)

~~Simplified sprayer. Stroi.pred.neft.prom. 2 no.8:29-30 Ag '57.~~
~~(MIRA 11:1)~~

(Spraying equipment)

GUSFV, V.P., dots. (Ristov)

Efficient paint mill. Stroi. pred. neft. prom. 2 no.12:23-25
(MIRA 11:3)
D '57.
(Painting mixing)

GUSEV, V.P., inzh.

Sprayer used with water paints. Rats. i izobr. predl. v stroi.
(MIRA 11:6)
no.5:21-22 '58.

1.Rostovskoye stroitel'noye upravleniye tresta Soyuzspetsstroy.
(Spraying equipment)

OUShev, V., inzh.

Small cantilever crane with the V-belt reducer. Sel'. stroi. 12
no.2:26-27 F '58. (MIRA 11:2)
(Crane, derricks, etc.)

L 29798-66 EWT(m)/EWP(t)/ETI LJP(c) JD/GD/JH
ACC NR: AT6016425 (A) SOURCE CODE: UR/0000/65/000/000/0173/0178

AUTHORS: Zakharov, Ye. D.; Sorokin, N. A.; Kuznetsov, A. N.; Siryavskiy, V. S.; 54
Gusev, V. P.; Kuznetsova, K. N.; Tsay, A. F.; Yegorova, L. S. 81

ORG: none

TITLE: Dependence of the stability of the solid solution in the alloy D16 on the
chemical composition

SOURCE: AN SSSR. Institut metallurgii. Metallovedeniye lehkikh splavov (Metall-
graphy of light alloys). Moscow, Izd-vo Nauka, 1965, 173-178

TOPIC TAGS: aluminum ~~containing~~ alloy, solid solution, magnesium containing alloy,
copper containing alloy, manganese containing alloy / D16 aluminum alloy

ABSTRACT: The stability of solid solution in D16 type aluminum alloys was studied
as a function of the alloy composition. The stability of the solid solutions was
determined by the method of step-wise tempering at 250, 300, 350, 400, and 450C
for periods of 0.5, 1, 2, 3, 5, 7, 10, 20, and 60 min. After tempering, the speci-
mens were naturally aged for a period of 10 days, then their electrical conduc-
tivity, strength limit, relative elongation, and flow limit were determined. The
experimental results are shown graphically (see Fig. 1). On the basis of the ex-
perimental data C-curves for the stability of solid solution were constructed (see
Fig. 2). The optimum alloy composition results from: less than 6% total copper

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L 29798-66

ACC NR: AT6016425

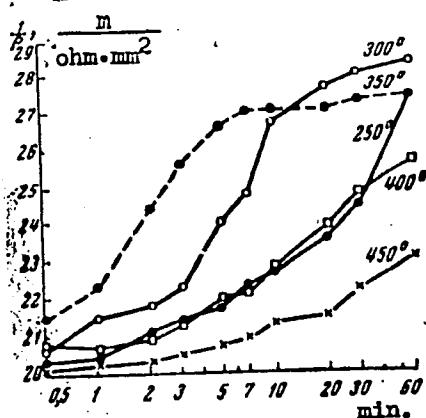


Fig. 1. Change in the electrical conductivity of alloy No. 1 (3.91% Cu; 1.2% Mg; 0.5% Mn) as a function of the duration of isothermal tempering at intermediate temperatures.

Card 2/3

L 29798-66

ACC NR:
AT6016425

D

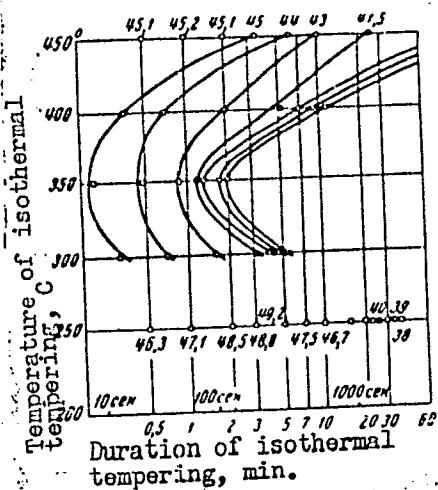


Fig. 2. C-type diagram for the stability of the solid solution in alloy No. 1, constructed from data for the change in the strength limit (for normal tempering $\sigma_f = 45.1 \text{ kg/mm}^2$).

and magnesium content for a total of less than 4.8% copper content. The manganese content should be less than 0.6%. Orig. art. has: 1 table and 5 figures.

SUB CODE: 11/ SUBM DATE: 16Sep65/ ORIG REF: 001/ OTH REF: 002

Card 3/3 ✓

ACC NR: AP7010699

SOURCE CODE: UR/0977/67/012/001/0045/0053

AUTHOR: Gusev, V. P.; Grebennikov, O. F.; Provornov, S. M.; Shahlovich, B. I.; Medvedev, A. G.

ORG: Leningrad Institute of Motion Picture Engineers (Leningradskiy institut kinoinzhenerov); Krasnogorsk Mechanical Works (Krasnogovskiy mekhanicheskiy zavod)

TITLE: High-speed raster-type motion picture camera RIS-2M

SOURCE: Zhurnal nauchnoy i prikladnoy fotografii i kinematografii v. 12, no. 1, 1967, 45-53

TOPIC TAGS: motion picture camera, high speed camera / RIS-2M high speed motion picture camera

SUB CODE: 14

ABSTRACT: As reported earlier by Provornov and Grebennikov (Tekhn. kino i televideniya, 1957, No 2; 1959, No 2), the Leningrad institute LIKI has been working for years on the development of the raster-type motion picture camera. In 1957 several laboratory models of cameras with a speed of 100 million frames per second were produced; in 1960 a triggered camera with a speed range of 1,000 to 150,000 frames per second, and in 1963 a raster type motion picture camera with a speed of up to 500 million frames per second

Cord 1/2 UDC: 718.534.83 18001

ACC NR: AP7010699

were produced. Although two later models have gone into production at the Krasnogorsk Mechanical Works, this article gives the general principles of operation and the technical characteristics for the 1963 camera, the RKS-2M. The optical raster was produced at NIKFI (Scientific-Research Motion Picture Institute) and consists of a glass plate on which a number of spherical lenses are arranged so that each will produce in a single plane a circular image of the photographed object about 5-10 microns in diameter. The RKS-2M is described as a completely reliable camera. The illustrations include diagrams of the main optical system, the drive system and block diagram of the control panel, and photographs of the complete set, including auxiliaries, of the camera itself (1,500 mm long, 400 mm wide, 600 mm high, 100 kilograms) and six frames showing the various phases of discharge of the ISSh-500 pulsed tube obtained with the RKS-2M at a speed of 260 million frames per second, using 16-mm "Mikro" film. Orig. art. has: 7 figures.

JPRS: 40,300

Card 2/2

GUSEV, V.P.

Surveying 40 years of Crimean soil research. Izv. Krym. otd.
Geog. ob-va no.5:87-94 '58. (MIRA 14:9)
(Crimea--Soil research)

GUSEV, V.P.; KOLESNICHENKO, V.T.

The characteristics of soil formation in the northern Crimean
lowland. Izv. Krym. otd. Geog. ob-va no.5:141-161 '58.
(MIRA 14:9)

(Crimea--Soil formation)

AZERBAYEV, I.N.; GUSEV, V.P., kand.khim.nauk; TATARCHUK, V.V.; SHOVKAN',
A.Ya.

Synthesis of propargylamines. Vest. AN Kazakh. SSR 20 no.4:60-62
(MIRA 17:9)
Ap '64.

1. Chlen-korrespondent AN KazSSR (for Azerbayev).

GUSEV, Vladimir Petrovich; NAZAROV, A.S., inzh.; MINKENICH, D.I.,
nauchn. red.; DOLGOVA, A.Sh., red.; NUPKINA, V.G., red.

[Manufacture of radio equipment] Froizvodstvo radicapratury. Moskva, Vysshiaia shkola, 1964. 342 p.
(MIRA 18:1)

PROVOROV, S.M.; GREBENNIKOV, O.F.; GUSEV, V.P.

Electromechanical shutter for high-speed motion-picture cameras
and its experimental testing. Trudy LIKI no.8:43-46 '62.
(MIRA 16:6)

1. Kafedra kinofotoapparatury Leningradskogo instituta kino-
inzhenerov.
(Shutters, Photographic--Testing)

KUZ'MIN, L.K., inzh.; GUSEV, V.P., mashinist

Our readers discuss the book "Switching diesel locomotives."
Elek. i tepl. tiaga 6 no.10:40, p.3 of cover 0 '62.
(MIRA 15:11)

1. Depo Mineral'nyye Vody Severo-Kavkazskoy
dorogi (for Kuz'min). 2. Depo Lyublino Moskovskoy
dorogi (for Gusev).
(Diesel locomotives)
(Railroads—Making up trains)

BORISOV, D.S. (Moskva); GUSEV, V.P. (Moskva); KOBRINSKIY, A.Ie. (Moskva)

Some characteristics of step-by-step motors. Mashinovedenie no.1:44-
50 '65. (MIRA 18:5)

PROVOROV, S.M.; GREBENNIKOV, O.F.; GUSEV, V.P.; PERTSEV, S.M.

Photomicrographic attachment for the high-speed SKS-1 motion-picture
camera. Trudy LIKI no.11:29-33 '64.
(MIRA 18:10)

1. Kafedra kinofotoapparatury Leningradskogo instituta kinoinzhenerov.

SHCHERBAKOV, N.G., inzhener; GUSEV, V.S., inzhener;

Using VGT steam generator at the Kazan Fat Combine. Masl.-zhir.
prom. 21 no.3:32-33 '56. (MLRA 9:8)

1. Kazanskiy zhirkombinat.
(Boilers) (Phenyl ether)

MIKHAYLOVA, R.S.; GUSEV, V.S.

Salmonellosis in wild birds. Zhur. mikrobiol. epid i immun. 31 no.6:
110-111 Je '60. (MIRA 13:8)

1. Iz Nauchno-issledovatel'skogo protivochumnogo instituta Kavkaza
i Zakavkaz'ya.
(Daghestan-Salmonella) (Birds--Diseases)

MIKHAYLOV, Yu.A., inzh.; POLOVCHY, I.F., kand. tekhn. nauk.
CHERNYAYEV, I.V., inzh.; VASIL'YEV, N.N., inzh.; VPRSHKOV, V.A.,
inzh.; GUSEV, V.S., inzh.

Study of internal overvoltages in a 500 kv. network of the
Moscow Regional Power System Administration. Elek. sta. 35
no. 5:67-71 My '64. (MIRA 17:8)

BURSHTEYN, Feliks Isayevich; GUSEV, Vladimir Timofeyevich;
GRANBERG, A.G., nauchn. red.; KONIKOV, L.A., red. izd-va;
PONOMAREVA, A.A., tekhn. red.

[What an interbranch balance is] Chto takoe mezhotraslevoi
balans. Moskva, Ekonomizdat, 1963. 85 p. (MIIA 16:10)
(Russia—Economic policy)
(Industrial statistics)

GUSEV, V.V.; Prinimala uchastiye; SHEVCHENKO, O.F.

Composition of arsenic compounds in Kerch ores. Dokl. AN SSSR
152 no.2:426-429 S '63. (MIRA 16:11)

I. Institut mineral'nykh resursov AN UkrSSR. Predstavлено
akademikom N.M. Strakhovym.

GUSEV, V. V.; SHEVCHENKO, O. F.

Possibility of the separate determination of trivalent and pentavalent arsenic in the presence of ions of ferric and ferrous oxides. Ukr. khim. zhur. 28 no.3:377-382 '62.
(MIRA 15:10)

1. Institut mineral'nykh resursov AN UkrSSR.

(Arsenic compounds) (Iron oxides)

GUSEV, V. V.

Reaction of arsenious anhydride with iron oxides at high
temperatures. Ukr. khim. zhur. 28 no.5:577-584 '62.
(MIRA 15:10)

1. Institut mineral'nykh resursov AN UkrSSR.

(Arsenic oxides) (Iron oxides)